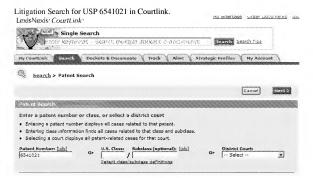
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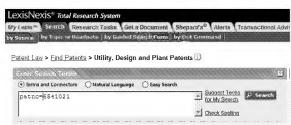
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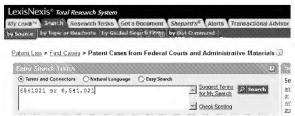
Devices and methods for pain management

INVENTOR: Johnson, Randolph Melius - Half Moon Bay, California, United States (US); Theeuwas, Fefix - Los Altos Hills, California, United States (US) APPL-NO: 522535 (09)

FILED-DATE: March 10, 2900

GRANTED-DATE: April 1, 2003

ASSIGNEE-PRE-ISSUE: June 27, 2000 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS), DURECT CORPORATION 10240 BUBE Lexis lists litigation at the top of its patents: No litigation listed.



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Searched the Questel-Orbit, PlusPat database. Results are below. 1 / 1 PLUSPAT - @Questel - image Patent Number : US6541021 B1 20030401 [US6541021] Title : (B1) Devices and methods for pain management Patent Assignee : (B1) DURECT CORP (US) Patent Assignee : Durect Corporation, Cupertino CA [US] Inventor(s): (B1) JOHNSON RANDOLPH MELLUS (US); THEEUWES FELIX (US) Application Nbr : US52253500 20000310 [2000US-0522535] Priority Details : US52253500 20000310 [2000US-0522535] US12558999P 19990318 [1999US-P125589] Intl Patent Class : (B1) A61F-002/00 A61F-013/00 A61K-009/22 A61K-009/24 A61N-043/42 IPC Advanced All : A61K-009/00 [2006-01 A - I R M EP]; A61K-009/22 [2006-01 A - I R M US]; A61K-031/4468 [2006-01 A - I R M EP]; A61K-031/4535 [2006-01 A - I R M EP]; A61K-047/10 [2006-01 A - I R M EP]; A61K-047/14 [2006-01 A - I R M EP1: A61K-047/26 [2006-01 A - I R M EP1 IPC Core All : A61K-009/00 [2006 C - I R M EP]; A61K-009/22 [2006 C - I R M US]; A61K-031/4468 [2006 C - I R M EP]; A61K-031/4523 [2006 C - I R M EP]; A61K-047/10 [2006 C - I R M EP]; A61K-047/14 [2006 C - I R M EP]; A61K-047/26 [2006 C - I R M EP] EPO ECLA Class : A61K-009/00M5D A61K-031/4468 A61K-031/4535 A61K-047/10 A61K-047/14 A61K-047/26 ORIGINAL (O): 424422000; CROSS-REFERENCE (X): 424423000 424424000 424425000 424449000 424450000 424473000 424484000 514282000 604890100 604891100 604892100 Document Type : Citations : US3141823 [US3141823] -US3760984 [US3760984] -US3845770 [US3845770]

-US3916899 [US3916899] -US3923426 [US3923426] -US3987790 [US3987790] -US3995631 [US3995631] -US3998834 [US3998834] -US4016880 [US4016880] -US4036228 [US4036228] -US4111202 [US4111202] -US4111203 [US4111203] -US4167574 [US4167574] -US4203440 [US4203440] -US4203442 [US4203442] -US4210139 [US4210139] -US4327725 [US4327725] -US4360019 [US4360019] -US4487603 [US4487603] -US4576951 [US4576951]

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-US4582835 [US45828351
-US4588580 [US4588580]
-US4627850 [US4627850]
-US4681560 [US4681560]
-US4692147 [US4692147]
-US4725852 [US4725852]
-US4769372 [US4769372]
-US4781924 [US4781924]
-US4865845 [US4865845]
-US5057318 [US5057318]
-US5059423 [US50594231
-US5112614 [US5112614]
-US5137727 [US5137727]
-US5180716 [US5180716]
-US5187177 [US5187177]
-US5234692 [US5234692]
-US5234693 [US52346931
-US5346903 [US5346903]
-US5356635 [US5356635]
-US5451408 [US5451408]
-US5472943 [US5472943]
-US5486362 [US5486362]
-US5487739 [US5487739]
-US5512578 [US5512578]
-US5580876 [US5580876]
-US5589480 [US55894801
-US5633000 [US5633000]
-US5660854 [US5660854]
-US5672167 [US5672167]
-US5728396 [US5728396]
-US5729396 [US5729396]
-US5747058 [US5747058]
-US5767125 [US5767125]
-US5798114 [US5798114]
-US5858388 [US5858388]
-US5866164 [US58661641
-US5980927 [US5980927]
-US5985305 [US5985305]
-USRE36547 [USRE36547]
-US6096756 [US6096756]
-US6203813 [US6203813]
-US6245351 [US6245351]
-US6436091 [US6436091]
-EP9749391 [WO97493911
-EP9851246 [WO9851246]
-WO9727840 [WO9727840]
-WO9749391 [WO9749391]
-WO9851246 [WO9851246]
-WO9936071 [WO9936071]
Paix et al., 1995, "Subcutaneous fentanyl and subfentanyl infusion
substitution for morph . . . ", vol. 3: 263-269.* - Anderson et al. (1998). "Alternate Routes of Opioid Administration in
Palliative Care: Pharmacologic and Clinical Concerns" J. Pharmaceutical
Care in Pain Symptom Control, vol. 6(1):5-21.
- Bansinath, et al. (1989). "Hyperglycemia does not modify the pupillary
effects of .mu. and .kappa. opiate agonists in mice" J. Ocular
Pharmacology, vol. 5(1): 33-43.
- Bruera et al. (1987), "Use of the subcutaneous route of the
administration of narcotics in patients with cancer pain" Cancer, vol.
62(2): 407-411.
- Cherny et al. (1995). "Opioid pharmacotherapy in the management of
cancer pain" Cancer, vol. 76(7): 1283-1293.
- Clotz et al. (1991). "Clinical uses of fentanyl, sufentanil, and
```

- alfentanil" Clinical Pharmacy, vol. 10: 581-593.
- Coda et al. (1997). "Comparative efficacy of patient-controlled administration of morphine, hydromorphone, or sufentanil for the treatment of oral mucositis pain following bone marrow transplantation" Pain, vol. 72: 333-346.
- Crane (1994). "Intermittent subcutaneous infusion of opioids in hospice home care: An effective, economical, manageable option" Am. J. Hospice & Palliative Care, vol. Jan./Feb. 8-12.
- Dhasmana et al. (1987), "Gastrointestinal transit following inthrathecal or subcutaneous narcotic analgesics" Arch. Int. Pharmacodyn., vol. 286: 152-161.
- Fuginaga et al. (1988). "Reproductive and teratogenic effects of sufentanil and alfentanil in Sprague-Dawley rate" Anesth Analg. vol. 67: 166-169.
- Geller et al. (1993). "A randomized double-blind comparison of epidural sufentanil versus intravenous sufentanil or epidural standard analgesia after major abdominal surgery" Amest. Analg, vol. 76: 1242-1250.
- Kerr et al. (1988). "Continuous narcotic infusion with patient-controlled analgesia for chronic cancer pain in outpatients" Annals of Internal Medicine, vol. 108;554-557.
- Leelanuntakit (1996). "Management of cancer-related pain with transdermal fentnyl" J. Med. Assoc. Thai, vol. 79(6): 341-346.
- Moulin et al. (1992). "Subcutaneous narcotic infusions for cancer pain: treatment outcome and guidelines for use" Can. Med. Assoc. J., vol. 146(6): 891-897.
- Mucha et al. (1990). "Parker and Radov test of drug withdrawal nucrion: Opposite effect in rats chronically infused with sufentanil or amphetamine" Pharmacology Biochem. & Behavior, vol. 35: 219-224. - Paix et al. (1995). "Subecutaneous fentanyl and sufentanil infusion
- Paix et al. (1995). "Subcutaneous rentanyl and surentanil infusion substitution for morphine intolerance in cancer pain management" Pain, vol. 3:263-269.
- Satterlee (1991). "Criteria for use of fentanyl citrate, sufentanil citrate, and alfentanil hydrochlorid.sup.a " Clinical Pharmacy, vol. 10:635-637.
- 5].o slashed.gren et al. (1994). "Disappearance of morphine-induced hyperalgesia after discontinuing or substituting morphine with other opioid agonists" Pain, vol. 59:313-316.
- Taverne et al. (1992). "Comparative absorption and distribution pharmacokinetics of intravenous and epidural sufentanil for major abdomincal surgery" Clin. Pharmacokinet., vol. 23(3): 237-237.
- Van den Hoogen et al. (1987). "Epidural and subcutaneous morphine, meperidine (pethidine), fentany and sufentanil in the rat: Analgesia and other in vivo pharmacologic effects" Anesthesiology, vol. 66: 186-194.
- Van den Hoogen et al. (1988). "Respiratory effects of epidural and subcutaneous morphine, meperidine (pethidine), fentanyl and sufentanil in the rat" Anest Analg, vol. 67: 1071-1078.
- Wagner et al. (1997). "Pharmacokinetics and pharmacodynamics of sedatives and analgescics in the treatment of agitated critically ill patients" Clin. Pharmacokinet, vol. 33(6):426-435
- Willens et al. (1993). "Pharmacodynamics, pharmacokinetics, and clinical uses of fentanyl, sufentanil, and alfentanil" Heart & Lung, vol. 22(3):239-251.
- Zeiler et al. (1991). "Kontinuierliche peridurale
- sufentanil-applikation zur postoperativen analgesie" Anaesthesist, vol. $40\colon\!543\!-\!548$.
- Ahmedzai (1997), "New approaches to pain control in patients with cancer." Eur. J. Cancer, 33(6):S8-S14.
- Anderson et al. (1998), "Alternate routes of opioid administration in palliative care: pharmacologic and clinical concerns." J. Pharmaceut. Care Pain Sympt. Control. 6:5-21.
- Coyle et al. (1994). "Subcutaneous opioid infusions at home." Oncology, 8:21-27.

```
- Fine (1997), "Fentanyl in the treatment of cancer pain." Sem. Oncol.,
  24(16):S16-S27.
  - Finley (1990), "Pain management with spinally administered opioids."
 Am. J. Hosp. Pharm., 47(1):S14-S17.
  - Jeal et al. (1997). "Transdermal fentanyl. A review of its
  pharmacologic properties and therapeutic efficacy in pain control."
  Drugs, 53:109-138.
  - Kerr et al. (1988). "Continuous narcotic infusion with
  patient-controlled analgesia for chronic cancer pain in outpatients."
  Ann. Intern. Med., 108:554-557.
  - Kingery (1997), "A critical review of controlled clinical trials for
  peripheral neuropathic pain and complex regional pain syndromes." Pain,
  73:123-139.
  - Martin et al. (1983), "Epidural and intrathecal narcotics." Can.
 Anaesth. Soc. J., 30:662-673.

    Shaw (1993), "Treatment of intractable cancer pain by electronically

  controlled parenteral infusion of analgesic drugs." Cancer.
  72:3416-3425.
  - Skaer (1993), "Management of pain in the cancer patient." Clin. Ther.,
  15:638-649.
  - Slattery et al. (1985), "Newer methods of delivery of opiates for
  relief of pain." Drugs, 30:539-551.
  - Vertafridda et al. (1987), "Intraspinal morphine for cancer pain."
  Acta Anaesthesiol Scand., 31(85):47-53.
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Abstract :
 The invention features devices and methods for the systemic delivery of
  fentanyl or a fentanyl congener (e.g., sufentanil) to treat pain. In the
 present invention, a drug formulation comprising fentanyl or a fentanyl
 congener is stored within a drug delivery device (e.g., contained in a
  reservoir or impregnated within a matrix within the controlled drug
 delivery device). The drug formulation comprises an amount of drug
  sufficient for treatment and is stable at body temperatures (i.e., no
  unacceptable degradation) for the entire pre-selected treatment period.
  The drug delivery devices store the drug formulation safely (e.g.,
 without dose dumping), provide sufficient protection from bodily
  processes to prevent unacceptable degradation of the formulation, and
  release the drug formulation in a controlled fashion at a
  therapeutically effective rate to treat pain. In use, the drug delivery
  device is implanted in the subject's body at an implantation site, and
  the drug formulation is released from the drug delivery device to a
 delivery site. The delivery site may be the same as, near, or distant
  from the implantation site. Once released at the delivery site, the drug
  formulation enters the systemic circulation and is transported to the
  site of action in the body to modulate the pain response (e.g., the
 brain or other pain sensory location).
Update Code :
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1 / 1 LGST - @EPO
Patent Number :
 US6541021 B1 20030401 [US6541021]
Application Number :
  US52253500 20000310 [2000US-0522535]
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  20000627 US/AS-A
 ASSIGNMENT
 OWNER: DURECT CORPORATION 10240 BUBB ROAD CUPERTING CALIF; EFFECTIVE
 DATE: 20000606
 ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: JOHNSON, RANDOLPH
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MELLUS; THEEUWES, FELIX; REEL/FRAME: 010943/0101 Update Code: 2004-29